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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/565,716	01/25/2006	Mutsuaki Murakami	20162.12USWO	7935
52835 7590 11/24/2009 HAMRE, SCHUMANN, MUELLER & LARSON, P.C. P.O. BOX 2902 MINNEAPOLIS, MN 55402-0902			EXAMINER HA, NGUYEN T	
			ART UNIT	PAPER NUMBER
			2831	
			MAIL DATE	DELIVERY MODE
			11/24/2009	PAPER

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

## Office Action Summary

**Application No.**

10/565,716

**Applicant(s)**

MURAKAMI ET AL.

**Examiner**

NGUYEN T. HA

**Art Unit**

2831

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 24 August 2009.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 23-31 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 23-31 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a). Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some \* c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)          | 4) <input type="checkbox"/> Interview Summary (PTO-413)           |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____                                      |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)          | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____  | 6) <input type="checkbox"/> Other: _____                          |

## **DETAILED ACTION**

### ***Response to Arguments***

Applicant's arguments, see remarks, filed 8/24/2009, with respect to (see argument) have been fully considered and are persuasive. The office action of non-final dated 5/27/2009 has been withdrawn. In view of the new prior art found, the examiner decision to make another rejection.

### ***Claim Rejections - 35 USC § 103***

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

Claims 23-31 are rejected under 35 U.S.C. 103(a) as being unpatentable over Shiraishi et al. (US 6,989,289) in view of Schmidt (US 2004/0054041).

Regarding claim 23, Shiraishi et al. disclose a capacitor comprising:

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- a positive electrode (1) of a valve metal,
- a dielectric (3) of an anodized film formed on the valve metal, and
- a negative electrode (5) including a composite material in contact with the anodized film,
- wherein the composite material includes a conductive polymer and an electrolyte solution (column 9, lines 11-21).

Shiraishi et al. lack an ionic liquid capable of repairing a defect in the anodized film.

Schmidt teaches an ionic liquid capable of repairing a defect in the anodized film (0013).

It would have been obvious to one having ordinary skill in the art at the time the invention was made to use the ionic liquid as taught by Schmidt. in to Shiraishi et al. to do so, it would provides an excellent electron conductivity and oxide film for the electrolytic capacitor.

Regarding claim 24, Shiraishi et al. disclose the conductive polymer includes at least one selected from polypyrrole (column 22, lines 31-32).

Regarding claim 25, Shiraishi et al. disclose the negative electrode further includes a metallic part in contact with the composite material (column 19, lines 28-31).

Regarding claim 26, Shiraishi et al. disclose a method forming the capacitor comprising the steps of:

- making the mixture be in contact with the anodized film, and

- causing polymerization in the mixture to convert the at least one kind of monomer into the conductive polymer (see, claims 1-7).
- Shiraishi et al. lack a mixture including the ionic liquid and at least one kind of monomer,

Schmidt teaches a mixture including the ionic liquid and at least one kind of monomer (0013).

It would have been obvious to one having ordinary skill in the art at the time the invention was made to use the ionic liquid as taught by Schmidt. in to Shiraishi et al. to do so, it would provide an excellent electron conductivity and oxide film for the electrolytic capacitor.

Regarding claim 27, the teaching of Schmidt including the ionic liquid having been included in the mixture is remained in the composite material after the polymerization.

Regarding claim 28, the teaching of Schmidt including the steps of:

- preparing a layer of the conductive polymer, and
- impregnating the layer of the conductive polymer with the ionic liquid (0013).

Regarding claim 29, Shiraishi et al. in view of Schmidt including a source material kit for forming the composite material to be used comprising, an ionic liquid, and at least one kind of monomer.

Regarding claim 30, Shiraishi et al. disclose the monomer is to be used for forming one selected from polypyrrole.

Regarding claim 31, Shiraishi et al. disclose the valve metal is one selected from aluminum, tantalum, niobium (column 6, lines 66-67).

***Conclusion***

Any inquiry concerning this communication or earlier communications from the examiner should be directed to NGUYEN T. HA whose telephone number is (571)272-1974. The examiner can normally be reached on Monday-Friday from 8:30AM to 5:00PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Diego F. Gutierrez can be reached on 571-272-2245. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Nguyen T Ha/  
Primary Examiner, Art Unit 2831